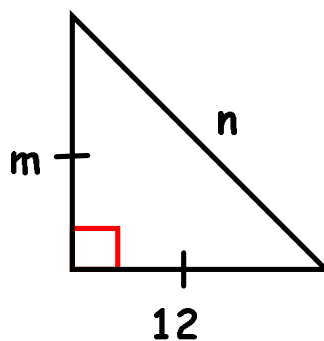
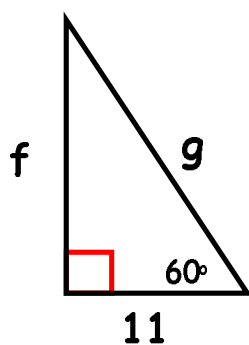
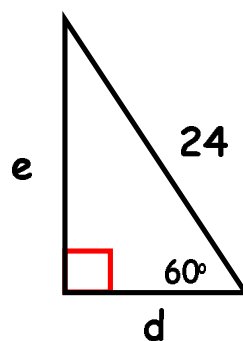
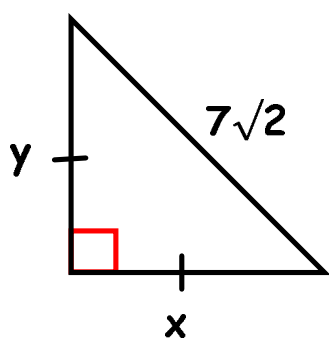


01/31/14 Agenda:

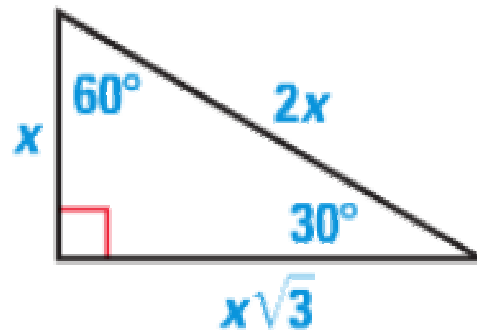
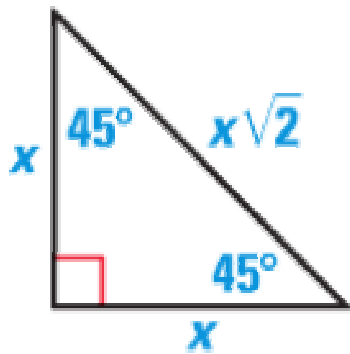
- Review Worksheet 5 - Quiz Review
- Quiz on 7.1, 7.2, & 7.4

Warm Up - Homework Out!

Find the missing sides:



- Quiz - Sections 7.1, 7.2, & 7.4
- Section 7.1
 - The Pythagorean Theorem
 - Pythagorean Triples
- Section 7.2
 - Converse of the Pythagorean Theorem
 - Pythagorean Inequalities (is Δ acute, right, or obtuse)
- Section 7.4
 - Special Right Triangles
 - 45-45-90 Triangles
 - 30-60-90 Triangles



Theorem Page:

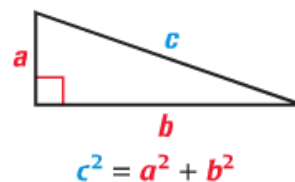
THEOREM

For Your Notebook

THEOREM 7.1 Pythagorean Theorem

In a right triangle, the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the legs.

Proof: p. 434; Ex. 32, p. 455

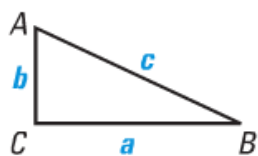


CONCEPT SUMMARY

For Your Notebook

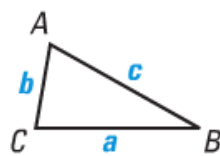
Methods for Classifying a Triangle by Angles Using its Side Lengths

Theorem 7.2



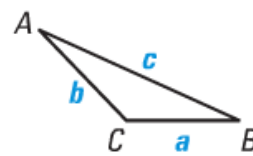
If $c^2 = a^2 + b^2$, then $m\angle C = 90^\circ$ and $\triangle ABC$ is a right triangle.

Theorem 7.3



If $c^2 < a^2 + b^2$, then $m\angle C < 90^\circ$ and $\triangle ABC$ is an acute triangle.

Theorem 7.4



If $c^2 > a^2 + b^2$, then $m\angle C > 90^\circ$ and $\triangle ABC$ is an obtuse triangle.

Theorem Page:

THEOREM

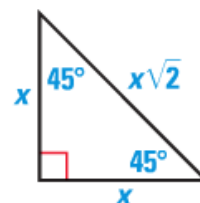
For Your Notebook

THEOREM 7.8 45°-45°-90° Triangle Theorem

In a 45°-45°-90° triangle, the hypotenuse is $\sqrt{2}$ times as long as each leg.

$$\text{hypotenuse} = \text{leg} \cdot \sqrt{2}$$

Proof: Ex. 30, p. 463



THEOREM

For Your Notebook

THEOREM 7.9 30°-60°-90° Triangle Theorem

In a 30°-60°-90° triangle, the hypotenuse is twice as long as the shorter leg, and the longer leg is $\sqrt{3}$ times as long as the shorter leg.

$$\text{hypotenuse} = 2 \cdot \text{shorter leg}$$

$$\text{longer leg} = \text{shorter leg} \cdot \sqrt{3}$$

Proof: Ex. 32, p. 463

